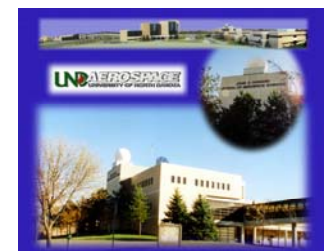




FAA Centers of Excellence Center for General Aviation Research (CGAR)



November 5, 2003



CGAR not Cigar

- CGAR is about teaming
- No “I” in team
- No “I” in CGAR
- www.cgar.org





Team Members

- **Embry-Riddle Aeronautical University**
 - **Daytona Beach**
 - **Prescott**
- **University of North Dakota**
- **University of Alaska**
 - **Anchorage**
 - **Fairbanks**
- **Florida A&M University**
- **Wichita State University**



What we Bring to the Table

- **Diverse Capabilities/Resources**
- **Teaming and Partnership Experience**
- **Facilities and Equipment**
- **Geographical and Cultural Diversity**
- **Education of the Future Aviation Workforce**

Observations

- **Ability to fill unique role within a much larger project (or no job to small)**
- **Working across Centers**
- **Support various organizations**
 - **Sponsor is AAR-400 (Chris Seher)**
 - **AAR, Office of Aviation Research**
 - **AFS, Flight Standards Service**
 - **ASD, Office of System Architecture & Investment Analysis**



Facts and Figures

- **Established 2001**
- **Total Funding - \$7 mil**
- **30 Projects**



FAA/Industry Training Standards (FITS)



- **FAA and Industry working together develop industry consensus standards**
- **CGAR is developing both generic and specific standards**
- **Teaming with Industry**
 - **Eclipse Aviation**
 - **Elite Air Center (Cirrus)**
- **Teaming within CGAR**
- **Partnership Experience**





Taxiway Centerline Deviation Study



- Determine width and separation standards for taxiways
- CGAR collected data in Anchorage, Alaska, and developed methodology to separate out various aircraft classes
- Future aviation workforce





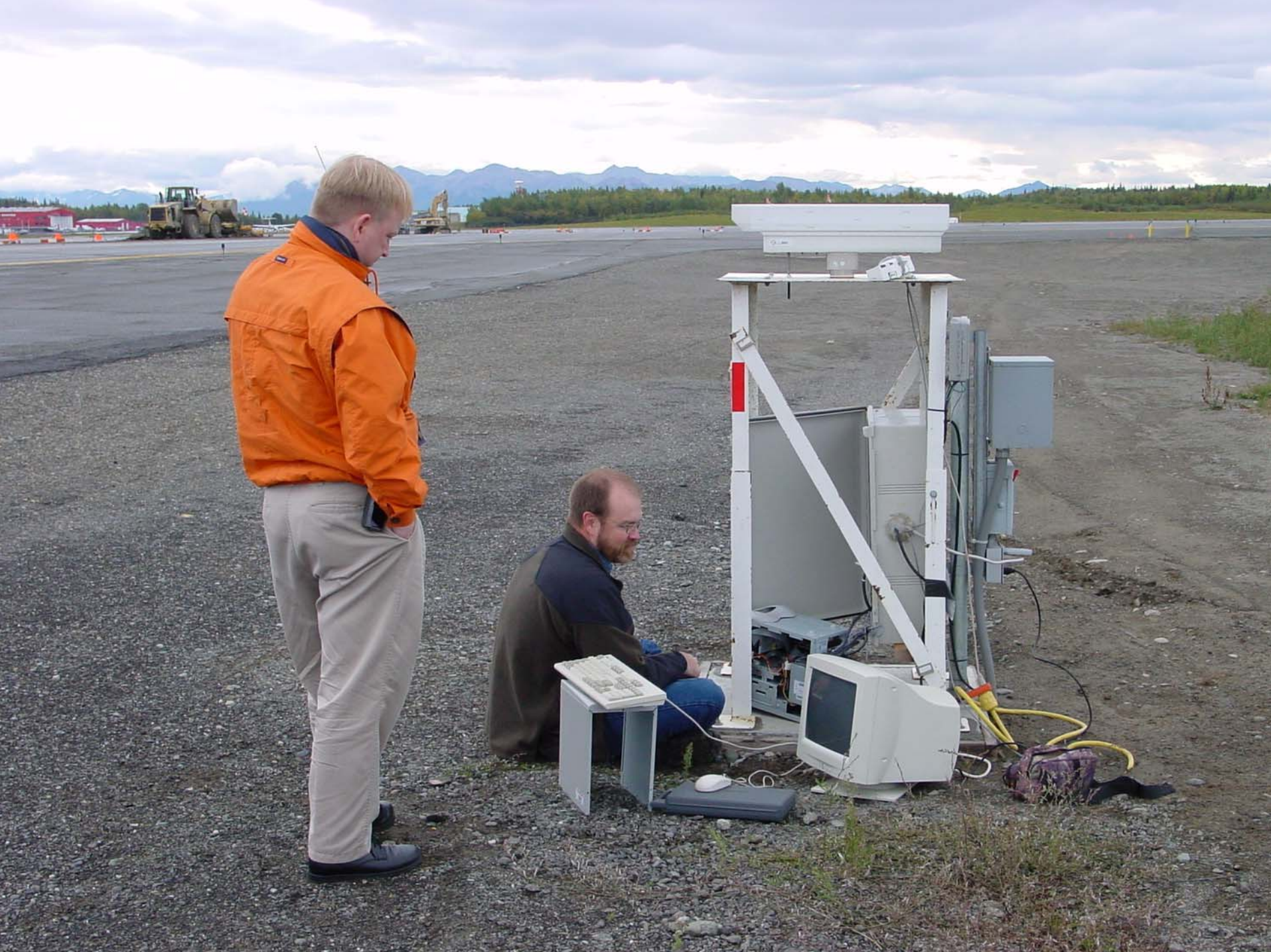






MAR 29 2001



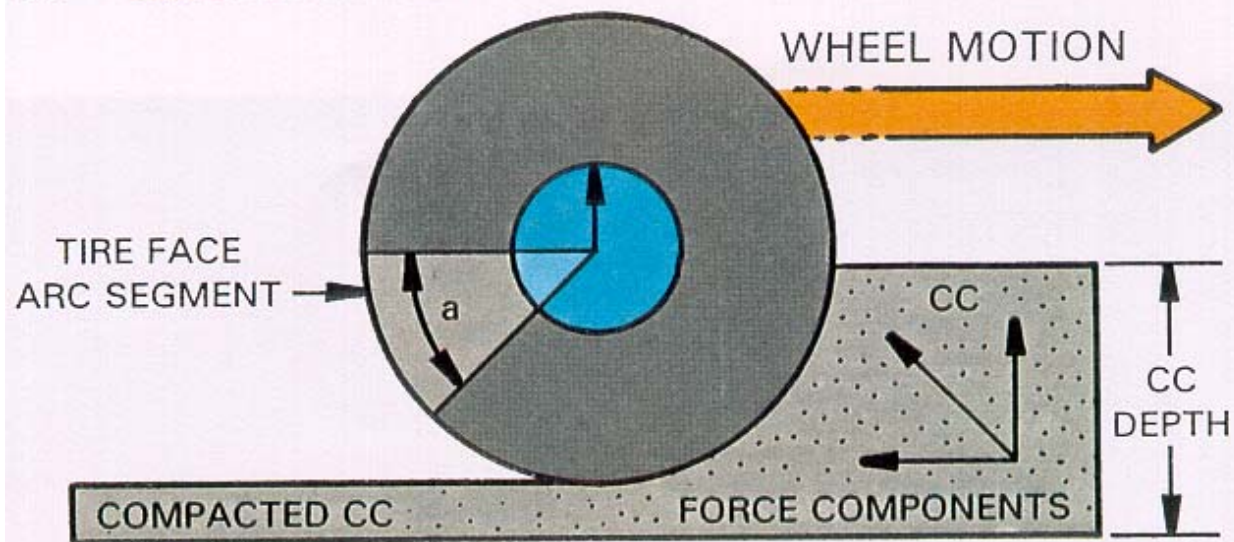


EMAS

- **Passive arresting system developed to stop aircraft that overrun the ends of runways**
- **Developed, deployed, additional testing**
- **CGAR is testing in actual cold weather conditions**
- **Unique capability**
- **Teaming with Industry**



CC = CELLULAR CEMENT



WHEEL CC INTERFACE





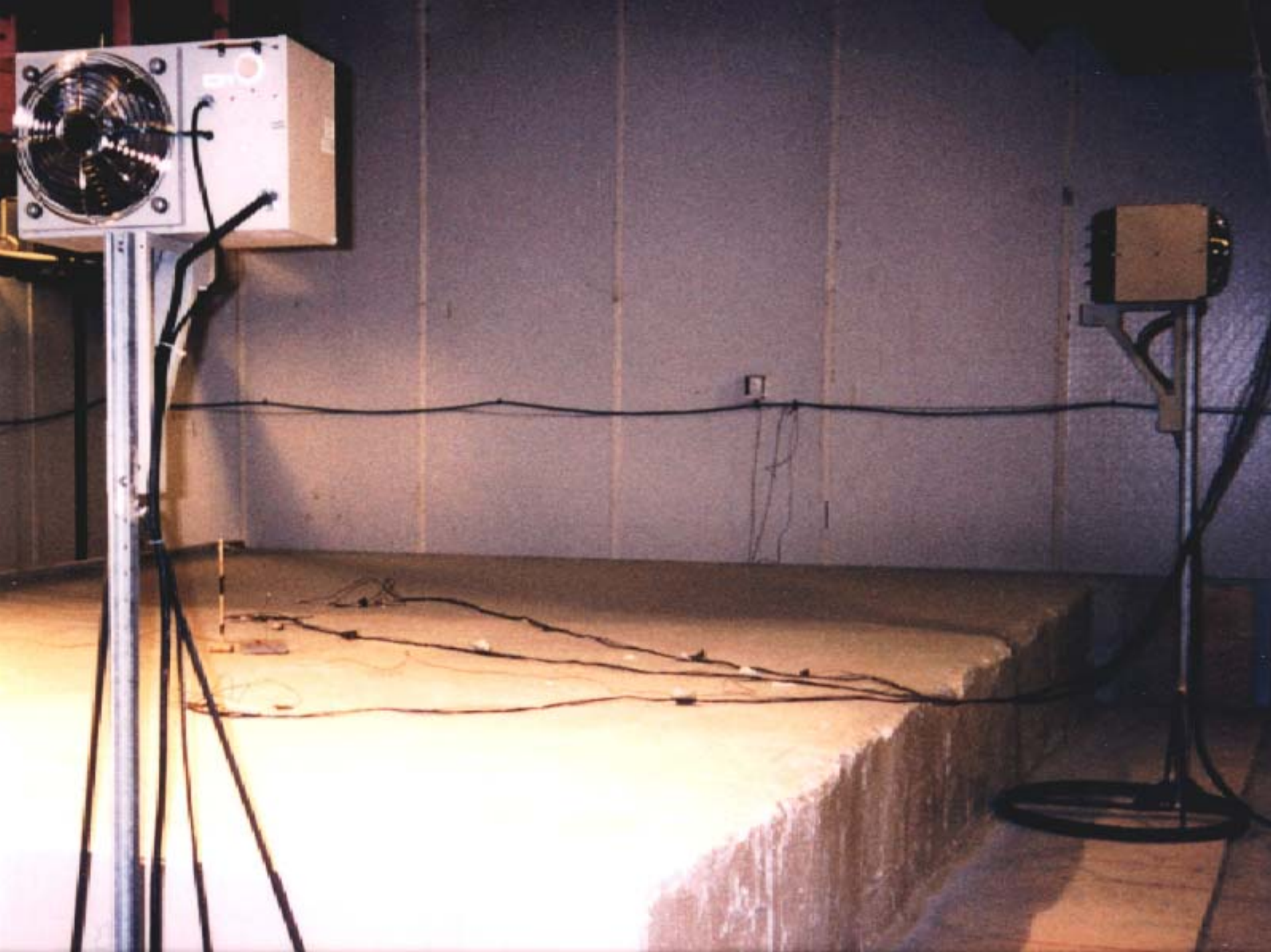




















Outreach

- **Cultural diversity**
- **Future aviation workforce**
- **Recruitment**
 - **High school seniors**
 - **Opportunity for students to visit the university**



FLIGHTLINE

IVAN MUNROE HANGAR









LIAA
Summer
2003





Friction Testing

- **Developing international runway friction indices for both summer and winter operation**
- **Smaller role of a larger international program**
- **CGAR project feeds into this by looking at smaller aircraft with respect to gravel runways**





CIRCLE CITY (CRC)

CRC CTAF 122.9

ELEVATION 610

N65 49.83/W144 04.55

Photo
February 1988

Data Date April 1998

OLD LNDG STRIP

YUKON
RIVER

15

3000 X 60

WINDSOCK

33

RWY 15/33 EDGES OVERGROWN-GRASS 4-6 IN HIGH
GRAVEL BERMS UP TO 1 IN HIGH NEAR LGTS AND RWY ENDS
100LL AVBL OFF ARPT CTC 122.9 FOR DELIVERY
ACTIVATE MRL VIA CTAF

Vericom VC-3000



Vericom VC-3000



Rural Winter Setting



Flight Loads

- Existing program which to date has concentrated to a large degree on transport aircraft
- Looking to collect and analyze data for
 - Business jets
 - Agricultural aircraft
- Teaming within CGAR
- Teaming across Centers
- Facilities and equipment





Wildlife

- **Grand Forks, North Dakota**
- **Problem with migratory birds**
- **Teaming across Centers**
- **Partnership between**
 - **Airport**
 - **City**
 - **Industry**
 - **CGAR**



28 11:08 AM



28 11:08 AM

LED Lighting

- **Determine the effectiveness of LED lights as a replacement for par 56 lamps**
 - **Laboratory testing completed**
 - **Need to test in cold and hot weather environments**
- **Teaming within CGAR**
- **Geographical diversity**







Recently Awarded Projects

- **Statistical Analysis for General Aviation Accidents**
- **Advanced Flight Control Systems Development for Safety Enhancements and Certification Aspects**
- **Effect of ADS-B on Near Mid-Air Collision Rates of General Aviation Aircraft**
- **P-Pamphlet Improvement for Aviation Safety Program**
- **FAA Airman Notification, Seminar & Event Tracking, and Online Education**
- **Review of the FITS Program: Program Tasks, Goals and Pilot Training Initiatives**

"We are what we repeatedly do.

Excellence,

then, is not an act, but a habit."

Aristotle

www.cgar.com

